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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,206	11/13/2003	Madhu Avasarala	100628.53040US	2662

23911 7590 08/09/2006

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EXAMINER
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NGUYEN, LEE

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application N .</b>		<b>Applicant(s)</b>	
	10/714,206		AVASARALA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	LEE NGUYEN		2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-27 is/are rejected.
- 7) ☒ Claim(s) 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS filed 04/19/2004 has been considered and recorded in the file.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-15 and 19-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki et al. (US 5,594,394).

Regarding claim 1, Sasaki teaches a transceiver (fig. 4), comprising: a receiver 304; a transmitter 301; a first antenna port 303; a second antenna port 302; a first switching element 344 to selectively couple said first antenna port 303 to said receiver 304; a second switching element 342 to selectively couple said second antenna port 302 to said transmitter 301; and a third switching element 343 to selectively couple said second antenna port 302 to said receiver 304.

Regarding claim 2, Sasaki also teaches that said third switching element comprises a resonant switch (148, fig. 1) which is configurable as a parallel resonant circuit in a first mode to substantially isolate said second antenna port from said receiver, and

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configurable as a coupling circuit in a second mode to substantially couple said second antenna port to said receiver (col. 5, line 50 through col. 6, line 4, and col. 6, lines 22-25).

Regarding claims 5-6, Sasaki also teaches that said first switching element comprises a field effect transistor (fig. 4, numeral 313).

Regarding claims 7-8, Sasaki also teaches that said second switching element comprises a field effect transistor (fig. 13, numeral 509).

Regarding claim 9, Sasaki further teaches that said resonant circuit comprises: a first capacitive element 528; a second capacitive element 529; a series inductive element 518 coupled to said first capacitive 528 element at a first node, and to said second capacitive element 529 at a second node; a fourth switching element 509 to selectively couple said second node to ground potential; and a fifth switching element 510 to selectively couple said second node to said receiver 504 (all in figure 6).

Regarding claim 10, Sasaki also teaches that said first capacitive element comprises a capacitor 528 (fig. 6).

Regarding claim 11, Sasaki further teaches that said second capacitive element comprises a capacitor 529 (fig. 6).

Regarding claims 12-13, Sasaki further teaches that said fourth switching element comprises a field effect transistor 509 (fig. 6).

Regarding claims 14-15, Sasaki also teaches that said fifth switching element comprises a field effect transistor 510 (fig. 6).

Regarding claim 19, Sasaki inherently teaches a first antenna coupled to said first antenna port 303; and a second antenna coupled to said second antenna port 302.

Regarding claims 20-21, Sasaki further teaches an electrostatic discharge (ESD) protection circuit 120, 121, 136, 141 coupled to said second antenna port 102 (fig. 1), including an inductive element 120 (fig. 1).

Regarding claims 22-27, the claims are interpreted and rejected for the same reason as set forth in claim 2.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-4, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al.

Regarding claims 3-4, Sasaki does not explicitly teaches that said receiver comprises a direct conversion receiver, a heterodyne receiver or a super heterodyne receiver, and that said transmitter comprises a direct conversion transmitter, a heterodyne transmitter or a super heterodyne transmitter. It is taken official notice that a transceiver can be either a direct conversion receiver, a heterodyne receiver or a super heterodyne receiver, and that said transmitter comprises a direct conversion transmitter, a heterodyne transmitter or a super heterodyne transmitter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the device of Sasaki with either a direct conversion receiver, a heterodyne receiver or a super

heterodyne receiver, a direct conversion transmitter, a heterodyne transmitter or a super heterodyne transmitter in order to apply to the specific technology requirement.

Regarding claim 18, Sasaki fails to teach that the transceiver is an integrated or monolithic transceiver. It is taken official notice that the art of providing an integrated transceiver is conventionally well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the device of Sasaki with an integrated circuit transceiver in order to reduce the weight as well as the size of the device.

***Allowable Subject Matter***


Claims 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 16, the prior art of record fails to teach all the components connected as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LEE NGUYEN  
PRIMARY EXAMINER